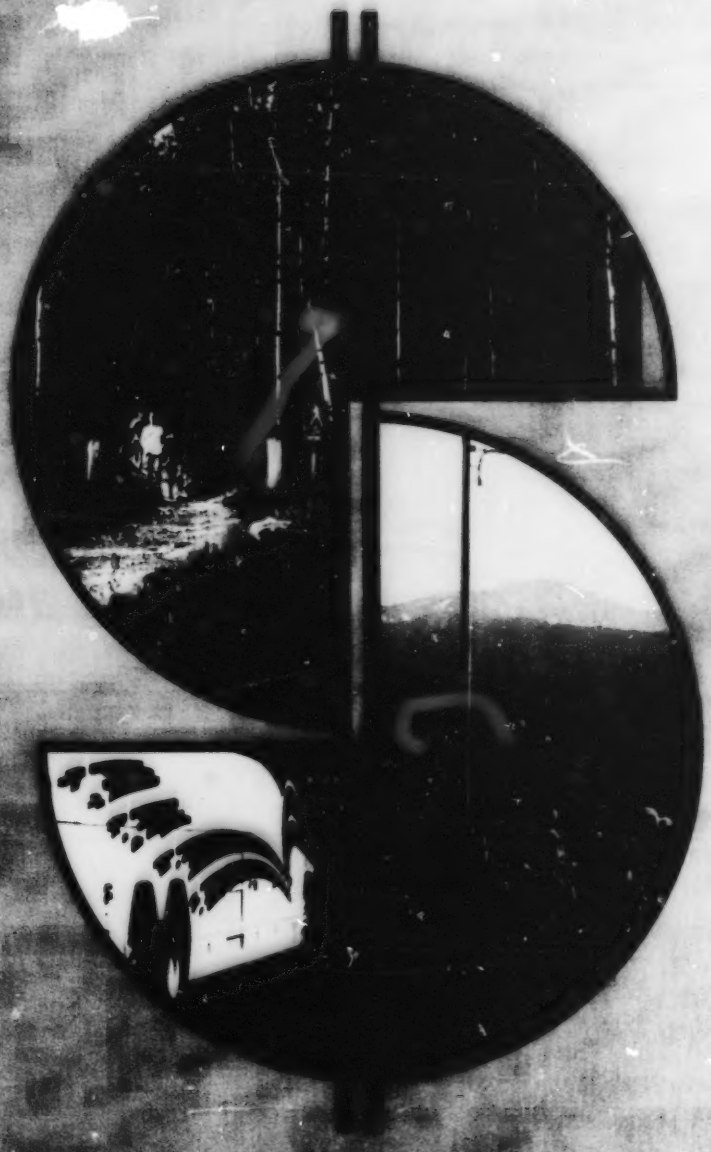
economic value of the visitor
of a regional economy: a case study
Forest

W.A. White



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The Canadian Forest Service of Natural Resources Canada is also a principal partner in each of the eleven Model Forest organizations and provides the primary funding and administrative support to Canada's Model Forest Program.

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Le Service canadien des forêts, Centre de foresterie du Nord, représente le gouvernement fédéral en Alberta, en Saskatchewan, au Manitoba, au Nunavut et dans les Territoires du Nord–Ouest en ce qui a trait aux recherches forestières et au transfert de technologie. Cet organisme s'intéresse surtout à la recherche en vue d'améliorer l'aménagement forestier afin que tous les Canadiens puissent en profiter aux points de vue économique, social et environnemental.

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Le Service canadien des forêts de Ressources naturelles Canada est également partenaire principal de chacune des onze forêts modèles, et il fournit l'essentiel du financement et de l'appui administratif au programme des forêts modèles du Canada.

La forêt modèle Foothills est un partenariat extraordinaire devoué à fournir des solutions pratiques envers la gestion durable de nos forêts.

Cover photographs courtesy of Bonita McFarlane and Adam Wellstead, Canadian Forest Service.

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MEASURING THE ECONOMIC VALUE OF THE VISITOR SECTOR OF A REGIONAL ECONOMY: A CASE STUDY OF THE FOOTHILLS MODEL FOREST

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ABSTRACT

Many economists, politicians, and business people acknowledge the growing importance of tourists and other visitors to the economies of resource-dependent communities. The economic value of visitors to a region is difficult to measure because elements of the economy such as restaurants and gas stations also cater to visitors. These businesses also make up part of the service sector for local residents. Statistical agencies are unable to distinguish purchases made by visitors from those made by local residents. In this study, a collection of secondary data sources was used to estimate the contribution of visitors to the economy of the Foothills Model Forest, in west central Alberta in 1997. This area provides a unique opportunity for this kind of study because it includes Jasper National Park, a popular visitor destination, and Hinton, a resource-based community. This paper also details the methodology used to obtain the estimates.

RÉSUMÉ

De nombreux économistes, politiciens et gens d'affaires reconnaissent l'importance de plus en plus grande que représentent les touristes et autres visiteurs dans l'économie des communautés dépendantes du secteur des ressources naturelles. Mais la valeur de cette activité économique est difficile à mesurer avec exactitude du fait que pour plusieurs des éléments qui la composent, on ne peut faire la distinction entre les achats effectués par des visiteurs et ceux effectués par des résidents locaux (p. ex. restaurants, stations d'essence, etc). Dans cette étude, on a pris un ensemble de sources d'information secondaires pour chiffrer la contribution des visiteurs à l'économie de la Forêt modèle des Foothills, dans la région du centre-ouest de l'Alberta en 1997. Cette région se prête exceptionnellement bien à ce type d'étude parce qu'elle comprend le parc national Jasper, destination touristique très populaire, et Hinton, communauté vivant du secteur des ressources naturelles. Ce rapport d'étude explique la méthodologie utilisée.

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DISCLAIMER

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INTRODUCTION

Local economies are driven by two factors: the amount of outside money entering the community and the ability of the community to retain those dollars. The first factor relates to the economic base of the community. For example, when a community sells lumber or other resource products, entertains visitors who purchase hotel stays, meals, and entertainment, or obtains transfers in the form of pensions or investment income, firms and individuals in the community receive incomes. The ability to hold those funds in the community, the second factor, dictates the size of the service sector for the firms and businesses. When the local firms that compose the economic base (and their employees) spend locally, the benefits of the economic base are "multiplied" in the form of local businesses and jobs in the service sector.

One of the elements of the economic base that is often mentioned as a potential driver of local economies is referred to as the "tourist" sector. This sector is especially important in the Foothills Model Forest (FMF), which is known for its many recreational and esthetic opportunities. The tourist sector is sometimes touted as a "green" alternative to resource sectors such as oil and gas, coal, and forestry. The potential role of tourism is difficult to measure because, unlike some other sectors, it is not treated explicitly in most data sources. For example, restaurants and service stations collect revenue from local citizens as well as from tourists. It is thus difficult to distinguish visitor spending from local spending. Further complicating the issue is one of the most troubling aspects of tourism-related research, the problem of defining the term. There are many competing definitions of what constitutes a "tourist" (see Ryan 1991; Organisation for Economic Co-operation and Development 1996). Some definitions include all visitors who travel more than 100 km, regardless of their intention, whereas others include only those who travel to pursue pleasure-oriented activities.

To overcome ambiguities associated with the term "tourist," we chose to focus on all visitor expenditures in the FMF. Measuring the economic contribution of visitors is a broader task than trying to assess the impact of tourists alone. In addition to visitors who come to the FMF for pleasure and recreation, there are those who come to the area for business, for conventions, or as part of work crews and those who are simply passing through. We examined these groups collectively because they all have the same type of impact on the economy. That is, in all cases people from outside the region are spending dollars within the FMF. Our goal in this study was to develop a method to estimate the total value of those expenditures for various industries (e.g., hotels and restaurants) and, where possible, to identify them with particular segments of the visitor population. This approach will allow for comparisons with the other major sectors (e.g., forestry, mining, and oil and gas) in the FMF economy.

The following section reviews previous studies that have measured the economic impact of visitors to the FMF. The third section outlines the methods used to estimate total visitor expenditures in the FMF in 1997 and describes the secondary data used to generate the estimates. The fourth section details the estimates of total expenditures, as well as the estimates for expenditures by the major visitor groups (i.e., vacation and pleasure travelers, business and convention travelers, work crews, and those passing through). A discussion and recommendations for future study constitute the final section.

The most recent comprehensive regional-level study of tourist impacts and expenditures in Alberta was conducted in 1990 and 1991 by Alberta's Department of Economic Development and Tourism. The *1990 Alberta Nonresident Travel Exit Survey* (Alberta Economic Development and Tourism 1991) measured the volume and expenditures of nonresident visitors ("nonresidents of Alberta who were exiting the province for the last time on their trip") in each of Alberta's tourist zones. The *1991 Alberta Resident Travel Survey* (Alberta Economic Development and Tourism 1994a) had a similar objective for resident visitors ("those residing inside the boundaries of Alberta and living at their primary residence"). Despite the importance of tourism as an economic engine, there has been surprisingly little economic research undertaken at either the regional or provincial level since 1991. Some organizations have undertaken visitor surveys in Jasper National Park to measure the impacts of tourism, and there are various other sources of information at the national and provincial levels in Canada, but current, reliable, and detailed information about visitors to the entire FMF area is nonexistent. Therefore, we have made inferences about the current level of economic activity by extrapolating from the results of other visitor studies and supplementing them with secondary data collected in the FMF by Canadian Forest Service researchers in the summer and autumn of 1997.

In addition to the Alberta-wide nonresident and resident surveys, there are three other noteworthy regional-level studies: the *Rocky Mountain National Parks Utilization Study* (Alberta Tourism 1991); and *Economic Impact of Visitors to Jasper National Park in 1991* (Alberta Economic Development and Tourism 1994b), both focusing on economic activity in Jasper National Park, and the *Canadian Travel Survey Profile 1994* (Statistics Canada 1994), which provided expenditure and profile data for both Jasper National Park and census division 14 (an area encompassing most of the rest of the FMF).

The nonresident travel exit survey (Alberta Economic Development and Tourism 1991) was designed to measure visitor volume and expenditures, to collect information on personal characteristics and travel behavior, and to evaluate travel trends and demands of nonresident visitors to Alberta's 14 tourism zones in 1990. A visitor was defined as "any person who indicated a specific location as their main destination in Alberta or who stayed at least one night in the province or community or tourism zone." Visitors were interviewed as they left the province at selected exit sites (e.g., along highways, in bus depots, and at airports). These interviews were supplemented by a 12-page mail-back questionnaire given to each respondent. In total 18 419 interviews were conducted between 1 January and 31 December, 1990, and 8 584 questionnaires were returned. A multistage stratified probability sample, by mode of exit, exit port, weekday or weekend, and season, was used for the analysis. Where respondents did not provide or break down expenditure information into individual categories, a formula based on totals and proportions recorded by similar travel parties was used. Although the boundaries for Alberta and Jasper National Park used in the nonresident survey were useful for our analysis, the Evergreen tourist zone used in that study (which includes Hinton and surroundings) does not conform neatly to the combined areas of Wilmore Wilderness Provincial Park, William A. Switzer Provincial Park, and Weldwood of Canada's forest management area, which constituted the region we have called "Hinton and area." In fact, the Evergreen tourist zone includes an area extending from the eastern border of Jasper National Park to the western border of the city of Edmonton, so the tourism estimates reported in Alberta Economic Development and Tourism (1991) may have been higher than expected for the non-Jasper portion of the FMF. Also, some of the data collected in the exit survey could not be released or must be interpreted with caution because of the small sample size.

In the *1991 Alberta Resident Travel Survey* (Alberta Economic Development and Tourism 1994a) the primary definition of a trip taken by a resident visitor was "one that had ended in the previous month, and which was not for the purpose of commuting to work or school, nor for the purpose of making a sales call or delivery and must either have been an overnight trip (at least one night away from home), or have involved a destination at

least 40 km or 25 miles away from the respondent's home." Households were selected by means of randomly generated telephone numbers to participate in telephone and self-completion questionnaires. Interviews took place during the first 2 weeks of each month and included all trips that ended between 1 January and 31 December, 1991. There were 17 704 telephone interviews, of which 14 112 involved travelers and 3 592 nontravelers. A total of 5 292 mail-back surveys and an additional 5 925 zone-specific questionnaires were returned by the deadline. The limitations of this survey for the FMF were similar to those of the 1990 nonresident survey.

The Canadian Travel Survey Profile is a biennial survey that collects information and computes estimates related to Canadian domestic travel, including expenditure and visitor profile data. The most recent survey was conducted each month in 1994 (Statistics Canada 1994). The total sample size was 117 866 for Canada, including 9 187 for Alberta. Information concerned overnight and same-day trips with a one-way distance from home of at least 80 km (at least 40 km in Ontario), not including travel to and from work or school, one-way travel involving a change in residence, or travel by members of operating crews. A traveler was defined as any person who completed a trip. Again, those passing through were not counted. We obtained a custom-run profile from these data, with the main variable being a trip destination of either Alberta census division 14 (Hinton area, now known as Yellowhead County, incorporating an area that overlaps the FMF but extends to the western border of Edmonton), or Alberta census division 15 (Jasper National Park). However, there are problems with using these survey results to obtain a regional picture. The information was not intended to be broken down beyond the provincial level, and many of the data must be interpreted with caution because of small sample sizes. Also, traveler expenditures were attributed to either the trip destination or the area where expenditures for overnight accommodation were made. Another drawback is the fact that the survey profile was limited to domestic travel only and did not take into account the role of foreign travelers in the Jasper National Park area.

The report *Economic Impact of Visitors to Jasper National Park in 1991* (Alberta Economic Development and Tourism 1994) examined the effects of tourism spending on the local, regional, and provincial economies through the use of the demand economic impact model, an input-output model. Expenditure information was gathered from the nonresident travel exit survey) (Alberta Economic Development and Tourism 1991) and the resident travel survey (Alberta Economic Development and Tourism 1994a) and adjusted to the common base year of 1991. Employment and taxes were the main economic impacts for which this report provided calculations.

The *Rocky Mountain National Parks Utilization Study* (Alberta Tourism 1991) examined various aspects of tourism in Banff, Jasper, Kootenay, and Yoho national parks. The original 1989 study was a cordon-type survey in which highway, scheduled bus, scheduled train, and chartered motor coach travelers exiting the four parks were randomly selected for interviews to determine if the respondent was considered a park visitor or a "pass-through." A parks visitor was defined as "an entrant who spent any time, money or did any sightseeing while within the four Rocky Mountain National Parks boundaries," and a pass-through was defined as "any entrant who did not spend any time or money and did not do any sightseeing while within the four Rocky Mountain Parks boundaries." The interviews took place between 15 June 1987 and 14 June 1988. Although some demographic information was obtained from both types of travelers, park visitors were also given questionnaires to be filled out and mailed back after leaving the park. On-site self-completion questionnaires were used during the winter months and for chartered motor coach passengers. A multistage stratified probability sample, by mode of exit, exit port, weekday or weekend, and season, was employed. A total of 3 551 interviews were completed. Along with visitor characteristics, the survey results included numbers of visitors to and expenditures in the region for the 1-year period of the study.

Two types of data were reported in all five regional studies: common expenditures, such as accommodation, meals and beverages, and vehicle operation (i.e., gas and repairs); and the main purpose given for the trip. The reasons for making trips included vacation, business, and shopping. The data on expenditures and purposes of trips to Jasper National Park and Hinton, as reported in these studies, are summarized below. These results were important for estimating 1997 visitor expenditures in the FMF.

Of the five studies, four reported percentages of visitor expenditures for various types of purchases. For the most part, the percentages were consistent across all studies. The exception was the *1990 Alberta Nonresident Travel Exit Survey* (Alberta Economic Development and Tourism 1991). In that survey, 37.6% of expenditures was classed as "travel packages," which often include accommodation, meals and beverages, and vehicle operation (i.e., tour buses).

According to these reports, two main categories of expenditure for Jasper visitors were accommodation and meals and beverages. In all, these two categories represented over 40% of visitors' total expenditures. The other categories of expenditures were, in descending order, vehicle operation and maintenance (i.e., gas and repairs), commercial transportation, retail, and recreation and entertainment.

Jasper National Park

Data on expenditures in Jasper National Park as reported in previous publications are presented in Table 1. The study of the Rocky Mountain parks (Alberta Tourism 1991) did not provide a breakdown of expenditures; total spending reported in that study was $112 900 000.

The overwhelming majority of people who came to Jasper did so primarily for vacation and pleasure-related activities (Table 2). The remainder indicated business, personal reasons, or visits to family or friends as their main purpose.

Hinton and Area

Data on expenditures in Hinton and the surrounding area are presented in Table 3. The expenditure pattern for those visiting the Evergreen tourist zone (Table 3) was slightly different from that for visitors to the Jasper tourist zone (Table 1). The largest expenditure for these visitors was vehicle maintenance, followed by meals and beverages. Accommodation was the third-largest reported expenditure (even among nonresidents). However, the "other" category in the 1990 Alberta Nonresident Travel Exit Survey (Alberta Economic Development and Tourism 1991) included travel packages, which may mean that accommodation was underestimated. Another interesting finding was that groceries represented a fairly large expenditure for resident visitors (Alberta Economic Development and Tourism 1994a). Unlike Jasper's visitors, who went primarily for vacation and pleasure, visitors to the Hinton area were more likely to go for other reasons, such as visiting family or friends and business trips (Table 4).

METHODS AND DATA

Methods

During the summer and autumn of 1997, updated secondary data related to visitor's expenditures were collected from many different sources, including government agencies such as Statistics Canada and the Alberta Department of Economic Development and Tourism and interviews with visitor-oriented business operators and government agencies. Among the data collected were two major categories of visitor-related expenditures: accommodation and meals. For some categories of visitor, such as nonresidents visiting Jasper, 50% of total expenditures was accounted for

Table 1. Expenditures by visitors to Jasper National Park

Expenditure category	% of total expenditures[a, b]			
	AEDT 1994b	Statistics Canada 1994	AEDT 1991	AEDT 1994a
Total expenditures ($)	195 714 877	306 594 000	92 370 000	77 065 100
Accommodation	26.3	24.0	14.6	19.4
Camping fees	1.4	NA	1.2	1.6[c]
Meals and beverages	23.4	24.0	15.6	23.3
Groceries	6.6	3.5	3.2	8.4[c]
Vehicle operation and maintenance	12.5	18.9	5.9	19.0
Car rental and local transportation	2.3	2.0	3.7	ND
Commercial transportation	9.4	9.9	NA	ND
Recreation and entertainment	6.1	10.0	4.5	8.3[c]
Retail	8.9	3.1 (clothing)	11.4	5.7[c]
Travel packages	NA	8.1[d]	37.6	8.2[c]
Conference and convention expenses	NA	NA	>0.01	ND
Other	2.5	4.6	1.9	ND

[a] Except where indicated otherwise.
[b] Percentages may not sum to 100 because of rounding.
[c] Data should be interpreted with caution because of small sample size.
[d] This value represents the aggregate of package-related expenses also accounted for in other categories, such as accommodation.
Note: AEDT = Alberta Economic Development and Tourism.
NA = not applicable.
ND = data could not be released because of small sample size.

Table 2. Purpose of trips to Jasper National Park

Trip Information	% of total trips[a, b]				
	Statistics Canada 1994	AEDT 1991	AEDT 1994a		Alberta Tourism 1991
			Phone survey	Questionnaire	
Total no. of trips	2 497 000	542 900	653 100	NA	1 600 000
Average size of party	NA	2.3	2.7	NA	2.64
Main purpose					
Vacation or pleasure	84.6	76	83.1	69.1[c]	69
Personal reasons	2.2	4	ND	NA	10
Business	6.3	3[c]	ND	NA	4
Day use	NA	NA	NA	NA	8
Visit family or friends	4.9	7	8.0[c]	NA	NA
Convention	1.9	Included in "Business"	ND	NA	NA
Shopping	NA	5	ND	NA	NA
Tourists	NA	NA	NA	NA	NA
Tour groups	NA	NA	NA	NA	NA
Other or not stated	0.1	5	ND	30.9[c]	8

[a] Except where indicated otherwise.
[b] Percentages may not sum to 100 because of rounding.
[c] Data should be interpreted with caution because of small sample size.
Note: AEDT = Alberta Economic Development and Tourism.
NA = not available.
ND = data could not be released because of small sample size.

Table 3. Expenditures by visitors to Hinton and area

Expenditure category	% of total expenditures[a, b]		
	Statistics Canada 1994	AEDT 1991	AEDT 1994a
Total expenditures ($)	24 438 000	12 140 000	94 816 700
Accommodation	11.2	17.6	3.4[c]
Camping fees	NA	Included. in "Accommodation"	ND
Meals and beverages	19.9	20.5	22.8
Groceries	12.6	Included in "Other"	12.8
Vehicle operation and maintenance	34.5	20.2	33.0
Car rental and local transportation.	0.3	Included in "Vehicle operation and maintenance"	ND
Commercial transportation	0.2	NA	ND
Recreation and entertainment	3.1	Included in "Other"	4.5[c]
Retail	8.0 (clothing)	17.4	11.8
Travel packages	3.3[d]	Included in "Other"	ND
Conference and convention expenses	NA	Included in "Other"	ND
Other	10.3	24.3	8.9

[a] Except where indicated otherwise.
[b] Percentages may not sum to 100 because of rounding.
[c] Data should be interpreted with caution because of small sample size.
[d] This value represents the aggregate of package-related expenses also accounted for in other categories, such as accommodation.
Note: AEDT = Alberta Economic Development and Tourism.
NA = not applicable.
ND = data could not be released because of small sample size.

Table 4. Purpose of trips to Hinton and area

Trip information	% of total trips[a, b]			
	Statistics Canada 1994	AEDT 1991	AEDT 1994a	
			Phone survey	Questionnaire
Total no. of trips	401 000	120 100	1 983 300	1 983 300
Average size of party	NA	2.3	2.3	2.2
Main purpose				
Vacation or pleasure	50.6	26.0	51.0	39.0
Personal reasons	10.2	14.0[c]	8.0	NA
Business	26.9	5.0[c]	5.4[c]	NA
Visit family or friends	11.5	36.0	28.1	30.2[c]
Convention	ND	Included in "Business"	Included in "Business"	NA
Shopping	NA	4.0	6.1	NA
Tourists	NA	NA	NA	NA
Tour groups	NA	NA	NA	NA
Other or not stated	0.8	14.0	1.4	30.8[c]

[a] Except where indicated otherwise.
[b] Percentages may not sum to exactly 100 because of rounding.
[c] Data should be interpreted with caution because of small sample size.
Note: AEDT = Alberta Economic Development and Tourism.
NA = not applicable.
ND = data could be released because of small sample size.

by accommodation and meals. The remaining unknown expenditures were extrapolated from the percentage breakdowns in Tables 1 and 3.

We were obliged to assume that both spending patterns and trip purposes had remained constant since 1990 and 1991, although because of growth in Hinton's forest sector, we may have underestimated the value of work-related trips. The calculation of the final expenditures for all goods and services in 1997 was based on the percentage breakdown given in the nonresident exit survey (Alberta Economic Development and Tourism 1991) and the resident travel survey (Alberta Economic Development and Tourism 1994a). These two regional studies were chosen as the main benchmarks because they were the most detailed of all studies to date. However, the results from the other three reports (Alberta Tourism 1991; Alberta Economic Development and Tourism 1994b; Statistics Canada 1994) were used to supplement or compare data whenever ambiguities arose.

Later in the Methods section, we detail the steps in calculating total known expenditures with assumptions made in previous studies. With a significant percentage of total expenditures known (from data on accommodation and meals), we extrapolated the remaining expenditures from the known percentages for four broad categories of visitors: non-Alberta (nonresident) visitors to Jasper, non-Alberta visitors to the Hinton area, Alberta (resident) visitors to Jasper, and Alberta visitors to the Hinton area. For example, for nonresidents visiting Alberta, we found that accommodation costs, restaurant expenses, and camping fees accounted for 50.03% of total expenditures or $59 697 711. Therefore, 1% of total expenditures was $1 193 239. This value was multiplied by the percent values of expenditures for which we were unable to find total expenditures. For example, retail trade accounted for 11.4% of nonresident expenditures in Jasper, and total estimated spending on retail purchases was estimated as $13 602 578 (11.4 x $1 193 239).

Secondary Data Sources

Secondary data sources corresponding to the 1990 and 1991 exit surveys for visitor-related activity in the FMF were found for accommodation (occupancy and room rates, number of rooms available); restaurant, caterer, and tavern revenues; and camping activity (number of campers, their length of stay, and their average expenditures). A discussion of each of these categories follows. Other data, such as number of outfitters, number of wilderness trail-riding trips, and related expenditures, could not be used directly because they were not specified in the 1990 and 1991 studies.

Accommodation Expenditures

An Alberta government report (Alberta Economic Development and Tourism 1997) provided data on 1996 occupancy rates for accommodations in Hinton and Jasper. The survey was based on the average room rate for double occupancy (also known as the rack rate). Although the room rates were for 1996, the data on demand were for 1995 and were based on 10 properties in Hinton (479 rooms) and 22 properties in Jasper (2058 rooms) (Alberta Economic Development and Tourism 1997) (Personal communication, Sid Nieuwenhuis, Senior Analyst, Alberta Economic Development and Tourism, Edmonton, Alberta, telephone discussions and letter to first author, August 1997). The average daily room rate for Hinton was $60.38, and the breakdown of room demand was as follows: work crews 23.9%, business travellers 16.4%, tourists 32.8%, tour groups 22.6%, convention groups 1.6%, and others 2.7% (Alberta Economic Development and Tourism 1997). The average daily room rate for Jasper was $83.50, and the breakdown of room demand was as follows: work crews 0.2%, business travellers 5.8%, tourists 42.6%, tour groups 38.8%, convention groups 8.2%, and others 4.4% (Alberta Economic Development and Tourism 1997). The annual estimates of accommodation expenditures for all hotels, motels, and resorts in Hinton and Jasper were based on the following calculation:

average room rate x average number of occupied rooms in the community x 365 days

where the average room rate accounts for annual occupancy rates of 65.4% for Hinton and 67.5% for Jasper.

In Hinton, including outlying rural areas and villages such as Brule and Cadomin, there were 479 rooms (1995 data) with an average room rate of $60.38 (1996 data), and the total accommodation expenditure was estimated at $10 529 536. In Jasper, there were 2058 rooms (1995 data) with an average

room rate of $83.50 (1996 data), and the total expenditure was estimated at $62 722 695. Thus, the total accommodation expenditure for the FMF was $73 252 231.

The Alberta Innkeepers survey gave us information about the types of visitors to various establishments. Therefore, it was possible to establish accommodation expenditures according to visitor type (Table 5). Not surprisingly, because of its natural resource industries, work crews and business travelers accounted for 40.3% of accommodation stays in Hinton. The lower room rates and lower occupancy rates in Hinton were important for tourists and tour groups, which constituted the majority of accommodation traffic there. The results in the following section reveal that a vast majority of the "tourists" visiting Hinton were transient, presumably on their way to Jasper. On the other hand, an overwhelming majority of accommodation stays in Jasper were related to tourism (vacation or pleasure), and many of those stays were by visitors who chose Jasper as their final destination.

Data were also collected from the Jasper Private Home Association to estimate expenditures for accommodation in private homes (including bed and breakfast establishments). According to the association, 140 licensed private homes let out rooms, and it was estimated that 200 rooms were available. The average cost per room was $60/night. The Jasper Private Home Association estimated that occupancy is 100% in July and August and 75% in June and September. During the rest of the year, rooms are occupied on weekends and holidays. The estimated expenditures for accommodation in private homes was $1 284 000 for July and August, 62 nights x $60/night x 200 rooms x 100% occupancy = $744 000; for June and September, 60 nights x $60/night x 200 rooms x 75% occupancy = $540 000). The data for private accommodation were included with other accommodation expenditures in the total expenditure calculations.

Restaurant Expenditures

Primary economic data on restaurant expenditures were not available for the FMF. However, estimates for restaurant revenue were calculated from secondary sources, namely the average yearly revenue for Alberta restaurants derived from the federal government's *Restaurant, Caterer and Tavern Statistics* (Statistics Canada 1995). Statistics Canada conducts a monthly survey of establishments serving food and alcohol in Canada. These establishments are classified into five types: licensed restaurants; unlicensed restaurants, including drive-ins; take-out food shops, including refreshment stands; caterers; and taverns, bars, and nightclubs. Information on these establishments is gathered and kept current through Statistics Canada's Business Register, which lists every business with employees and is derived from Revenue Canada's payroll deduction records. These businesses are stratified by province and kind of business or type of unit, and a random sample is selected for each month's survey. The department collects information on monthly sales by telephone or by means of a mail-in. The average annual revenue for each type of establishment in Alberta is listed in Table 6.

For our study, a list of the licensed restaurants, unlicensed restaurants, take-out services, caterers, and taverns, bars, and nightclubs in Hinton, Jasper, and surrounding areas (e.g., Brule and Robb) was produced from miscellaneous tourist guides and the Yellow Pages. The information was verified by the Town of Hinton's economic development group and by Jasper National Park (all businesses operating within Jasper National park must be registered with park authorities).

Table 7 shows estimated yearly revenue, determined by multiplying the number of each type of establishment in Hinton (and area) and Jasper by the provincial average revenue (derived from Table 6). The total restaurant revenues for Hinton and Jasper were estimated at $62 543 546. From a household expenditure survey of residents (Jagger et al. 1998), it was estimated that $10 860 182 of these restaurant expenditures were made by local FMF residents. The remainder ($51 863 364) represents estimated revenues from visitors to the FMF.

Camping Expenditures

Camping is a popular recreational activity in the FMF. Data on the number of campers were taken from McFarlane and Boxall (1996) or were acquired directly from Jasper National Park. McFarlane and Boxall (1996) examined camping in all of the forest recreation areas and William A. Switzer Provincial Park. Their analysis did not include camping

Table 5. Types of accommodation users and their spending in Hinton and Jasper National Park

	Hinton		Jasper	
Type of visitor	(%)	($)	(%)	($)
Work crews	23.9	2 523 012	0.2	125 445
Business travelers	16.4	1 731 272	5.8	3 637 916
Tourists	32.8	3 462 544	42.6	26 719 868
Tour groups	22.6	2 358 777	38.8	24 336 406
Convention groups	1.6	168 905	8.2	5 143 261
Other	2.7	285 026	4.4	2 759 798
Total	100	10 529 536	100	62 722 695

Table 6. Number of restaurants in Alberta and their average revenue

Type of establishment	No. in Alberta	Average yearly revenues ($)
Licensed restaurants	2284	603 492
Unlicensed restaurants	1414	480 114
Take-outs	1312	269 354
Caterers	538	614 998
Taverns	204	360 012

Table 7. Number of restaurants in Hinton[a] and Jasper National Park and their estimated total revenue

	Hinton		Jasper		
Type of establishment	No.	Total yearly revenues ($)	No.	Total yearly revenues ($)	Yearly revenues for FMF ($)
Licensed restaurants	22	13 276 824	38	22 932 696	36 202 520
Unlicensed restaurants	13	6 241 482	12	5 761 368	12 002 850
Take-outs	6	1 616 124	31	8 349 974	9 966 098
Caterers	1	614 998	2	1 229 996	1 844 994
Taverns	1	360 012	6	2 160 072	2 520 084
Total	43	22 109 440	89	40 434 106	62 543 546
From FMF Residents	NA	7 754 170	NA	3 106 012	10 860 182
From Visitors	NA	14 355 270	NA	37 328 094	51 683 364

[a] Includes outlying villages (e.g., Brule and Robb) and rural area.

activity in Wilmore Wilderness Provincial Park or Jasper National Park. They found that 7 464 camping trips, representing a total of 16 352 nights, were taken in the study area. Revenue from camping fees was calculated by subtracting the percentage of nights represented by campers from the town of Hinton and surrounding rural regions (33%), and then multiplying the remaining number of nights (10 900) by the average camping fee ($9.00). Total fees paid for the 10 900 nights of camping by nonresident campers was therefore $98 100.

Information from the *Jasper National Park Campground Statistics (1992-97)* (personal communication, David Kjorven, Parks Canada, Jasper, Alberta, letter to first author, August 1998) included the number of campers in various campgrounds in the park, as well as vehicle counts from the park gates for the months of May to October (yearly percentage changes were also given). Jasper National Park recorded a total of 144 095 camping nights. The average fee was $15.33, for total fees of $2 208 970.

Other camping expenditures, namely groceries, vehicle gas and oil, shopping, and recreation purchased in the area, were not available from the two reports cited. However, limited data on camping expenditures for Alberta do exist. The *1996 Provincial Parks Visitor Survey* for the Northwest Boreal/Peace Country District estimated average daily expenditure for vehicle maintenance, recreation and entertainment, shopping, and groceries (personal communication, Roy Finzel, Alberta Environmental Protection, Edmonton, Alberta, telephone discussion with first author, August 1998). In addition to their level of expenditures in these four categories, the 185 respondents to the survey were asked where they were from, the size of the travel party, and the length of their stay in the park. Despite the survey's small sample size, the total average expenditures closely corresponded to another study, which measured the economic benefits of camping in Ontario (Outspan Group 1998). Estimated camping expenditures for Hinton and Jasper National Park are presented in Table 8.

The total estimated expenditures for camping in the FMF in 1997 were $12 942 232. However, only camping fees were used in the calculations below.

Other Expenditures

In addition to data on accommodation, restaurant expenses (meals and beverages), and camping expenditures, data on other expenditures were also collected. Data for outfitting activity and related expenditures were obtained from the *1992 Alberta's Outfitted Hunting Industry: Analysis and Strategy* (EXCELeration Corp. 1992) and through correspondence with the Professional Outfitters Association of Alberta. These sources stated that the customers of outfitters have the highest expenditures per person of any known tourism segment in Alberta (approximately $5 500 per person per trip). For 1997 there were an estimated 180 allocations (the right to hunt one animal by a nonresident) in the FMF area. On the assumption that the outfitters sell one-half to three-quarters of their hunting opportunities each year, we estimated that 90–125 hunters purchase the service of outfitters in the region on an annual basis. The median value of this range is 108 hunters, and the total expenditures from outfitting were estimated at $594 000 per year.

Commercial trail-riding outfitters conduct trips into Wilmore Wilderness Provincial Park during the summer season. (Data provided by Alberta Environmental Protection indicate that a fair amount of backcountry travel occurs between Jasper National Park and Wilmore Wilderness Provincial Park, on either foot or horseback. Although backcountry user fees are collected by Parks Canada, none are collected for the portion of the trip in Wilmore Wilderness Provincial Park). The average cost for one day of guided trail riding, all expenses included, is $130 (derived from information in the *1996 Alberta Accommodation and Visitor's Guide*, page 56; trips are also made into Jasper National Park and the rest of the FMF, but data were not available for these areas). For the period 1980 to 1996, the average number of user days logged annually by commercial trail-riding companies was 2 796 (Alberta Economic Development and Tourism 1997). To estimate total expenditures on outfitted trips into Wilmore Wilderness Provincial Park, the average cost per day was multiplied by the number of user days: $130/day x 2 796 days = $363 480.

Other commercial operations, such as river rafting, mountain climbing, adventure tours, interpretive travel tours, and fishing tours, are found in the FMF. However, expenditure data for these activities are not yet available. As a result, expenditures for these activities could not be differentiated from total vacation and pleasure expenditures.

RESULTS

From the accommodation, restaurant and camping fee data and past visitor expenditure patterns, it was possible to estimate total visitor expenditures in 1997 for Jasper, Hinton, and the FMF. These expenditures were calculated according to the following three steps.

Step 1: Identify Known Expenditure Percentages

A definitive breakdown for 1997 visitor expenditures was not available. However, as described in "Methods and Data," we were able to collect data that corresponded to the breakdown in expenditures for the Jasper and Evergreen tourist zones in both the *1990 Alberta Nonresident Travel Exit Survey* (Alberta Economic Development and Tourism 1991) and the *1991 Alberta Resident Travel Survey* (Alberta Economic Development and Tourism 1994a). Although the Evergreen tourist zone is considerably larger than the area of the FMF other than Jasper National Park (given that it extends to the west boundaries of Edmonton), it does encompass that region. This area is referred to as Hinton and area in this report. These data included expenditures for accommodation, restaurants, and camping. We assumed that expenditure patterns had not changed since 1990 and 1991 and applied them to the 1997 data. For example, the *1991 Alberta Resident Travel Survey* (Alberta Economic Development and Tourism 1994a) reported that accommodation expenditures represented 19.4%, restaurants 23.3%, and camping fees 1.6% of all expenditures in Jasper by Alberta residents. Important modifications were made in the case of nonresident visitors to Jasper. The *1990 Alberta Non-resident Travel Exit Survey* (Alberta Economic Development and Tourism 1991; see Table 1) reported that accommodation accounted for 14.6% of expenditures, restaurants for 15.6% of expenditures, and camping fees for 1.2% of expenditures. The same table shows that travel packages represented 37.6% of visitor expenditures. However, accommodation and meals and beverages make up a large portion of travel package expenditures. Therefore, we used the average of both accommodation and meals and beverages from the 1994 Canadian travel survey (Statistics Canada 1994) and the *Economic Impact of Visitors to Jasper National Park in 1991* survey (Alberta Economic Development and Tourism 1994b) (also presented in Table 1). Accommodation was calculated as $(24.0 + 26.3)/2 = 25.15\%$ and meals and beverages $(24.0 + 23.4)/2 = 23.70\%$.

When these values were summed, and assuming that spending patterns had not changed, we found that 44.3% of all current visitor spending in Jasper by Alberta residents was accounted for by these three expenditure groups. The calculation was repeated for nonresident visitors to Jasper and then for visitors (both nonresident and resident) to the Hinton area (Table 9). In three of the four cases, the sum of accommodation, restaurants, and camping fees represented a large percentage of total visitor expenditures.

Step 2: Calculate Breakdown in Expenditures Between Nonresidents and Residents

Another problem encountered was that the 1997 data did not differentiate between resident and nonresident expenditures, whereas the 1990 and 1991 exit surveys did. In Table 10 the expenditure percentages for the Jasper and Evergreen tourist zones from the *1990 Alberta Non-resident Travel Exit Survey* (Alberta Economic Development and Tourism 1991) and the *1991 Alberta Resident Travel Survey* (Alberta Economic Development and Tourism 1994a) for accommodation, restaurant meals and beverages, and camping fees were used

to determine nonresident and resident expenditures in 1997. For example, 1990 and 1991 accommodation expenditures in Jasper (Alberta Economic Development and Tourism 1991, 1994a) totaled $38 163 210. The 1990 nonresident visitor survey reported that $23 212 581 of this total was spent by nonresidents (60.82% of total accommodation expenditures for Jasper). We therefore used 60.82% and 39.18% as the relative percentages of expenditures on accommodation by nonresidents and residents (Table 10). This process was repeated for all known 1997 expenditures in both areas. The proportions of accommodation, restaurant, and camping expenditures by nonresidents and residents were multiplied by the 1997 total expenditures in each category for each area. To use the same example, the total 1997 expenditure on accommodation in Jasper was estimated at $62 722 695 (see Table 5 for calculation). Nonresidents accounted for 60.82% of all expenditures in the Jasper region in 1990–1991, and in 1997 nonresidents accommodation expenditures totaled $38 147 934. Similarly, $24 574 752 was spent by Alberta residents on accommodation expenditures in Jasper. This process was repeated for all known expenditures in both areas.

Step 3: Calculate Total Expenditures by Nonresidents and Residents

The estimated 1997 expenditures by nonresident and resident visitors to Jasper and Hinton were summed (Table 10). For example, for nonresidents visiting Jasper, accommodation ($38 147 943), restaurant meals and beverages (20 504 322), and camping fees (1 045 506) totaled $59 697 771. Then, the percentage of all expenditures that these categories represented (from Table 9) was divided into the total estimated 1997 expenditures for nonresidents to obtain an

Table 8. Estimated camping expenditures for Hinton and Jasper National Park

	Hinton		Jasper National Park	
Expenditure category	Per party/day ($)	Total ($)	Per party/day ($)	Total ($)
Camping fees	9.00	98 100	15.33	2 208 970
Recreation[a]	2.98	32 482	2.98	435 771
Vehicle gas and oil[a]	27.45	299 205	27.45	4 014 068
Shopping[a]	7.72	84 148	7.72	1 128 911
Groceries[a]	26.76	291 684	26.76	3 913 168
Total	73.91	805 619	80.24	11 700 888

[a] Derived from the *1996 Provincial Parks Visitor Survey* for the Northwest Boreal/Peace Country District.

Table 9. Percentage expenditure breakdown for accommodation, restaurant meals and beverages, and camping

	Jasper National Park		Hinton area	
Expenditure category	Alberta nonresidents	Alberta residents	Alberta nonresidents	Alberta residents
Accommodation	25.13	19.4	17.6	3.4
Restaurant meals and beverages	23.7	23.3	20.5	15.4
Camping fees	1.2	1.6	ND	ND
Total	50.03	44.3	38.1	18.4

ND = no data.

Table 10. Expenditures on accommodation, restaurant meals and beverages, and camping by Alberta nonresidents and residents[a]

	Jasper National Park					Hinton area				
		Alberta nonresidents		Alberta residents			Alberta nonresidents		Alberta residents	
Expenditure category	Total 1997 expenditures ($)	% of 1990–1991 expenditures	Estimated 1997 expenditures ($)	% of 1990–1991 expenditures	Estimated 1997 expenditures ($)	Total 1997 expenditures ($)	% of 1990–1991 expenditures	Estimated 1997 expenditures ($)	% of 1990–1991 expenditures	Estimated 1997 expenditures ($)
Accommodation	62 722 695	60.82	38 147 943	39.18	24 574 752	10 529 536	39.85	4 196 020	60.15	6 333 516
Restaurant meals and beverages	37 328 094	54.93	20 504 322	45.07	16 823 771	14 355 270	14.56	2 090 127	85.44	12 265 142
Camping	2 208 970	47.33	1 045 506	52.67	1 163 464	98 100	NA	NA	NA	ND
Total	102 259 759	NA	59 697 771	NA	42 561 987	25 690 425	NA	6 286 147	NA	18 598 658

[a] Data for 1997 did not differentiate between resident and nonresident expenditures. Therefore, data in the 1990 and 1991 travel surveys (Alberta Economic Development and Tourism 1991, 1994a) were used to determine the percentage of total expenditures in each of the three categories for each area made by Alberta nonresidents and residents. These percentages were multiplied by the total 1997 expenditures in each category to determine expenditures by nonresidents and residents.

Note: NA = not applicable.
ND = no data.

Table 11. Calculation of 1% of total visitor expenditures

Visitor category	Total estimated expenditures ($)	% of expenditures	1% expenditure ($)
Alberta nonresident visiting Jasper	59 697 771	50.03	1 193 239
Alberta resident visiting Jasper	42 561 988	44.30	960 767
Alberta nonresident visiting Hinton	6 286 147	38.10	164 991
Alberta resident visiting Hinton	18 598 659	18.40	1 010 797

estimate of the dollar value of 1% of total expenditures (Table 11). In the example of nonresidents visiting Jasper, $59 697 771 was divided by 50.03%, thus $1 193 239 represented 1% of expenditures. After calculating the value of 1% for the three other categories, we applied these values to the respective unknown expenditure percentages in Tables 12 and 13. For example, in Table 12, grocery expenditures accounted for 3.2% of all expenditures by nonresidents visiting Jasper (Alberta Economic Development and Tourism 1991). Because 1% was $1 193 239, expenditures on groceries were multiplied by 3.2 for a total estimate of $3 818 366.

We were able to estimate 1997 expenditures for accommodation, restaurant meals and beverages, and camping fees, and we knew the breakdown in percentages from the 1990 and 1991 travel surveys. However, we were unable to calculate individual percentages for accommodation, meals and beverages, and camping fees. For instance, for nonresident visitors to Jasper, we knew that accommodations, meals and beverages, and camping fees represented 50.03% of the total or $59 697 771. The individual percentages (Tables 1 and 3) from the 1990 nonresident survey were 25.5%, 23.7%, and 1.2% respectively, but when these were multiplied by $1 193 239 (1% of expenditures, Table 11), we obtained inconsistent results. When calculated in this manner, accommodation expenditure estimates were $30 427 594, which does not correspond to the $38 147 945 calculated from the 1997 secondary sources. As a result, in tables for both Hinton and Jasper, we included the individual dollar amounts that were calculated from the secondary data for accommodations, meals and beverages, and camping fees but did not include their percentages from the 1990 and 1991 travel surveys.

The total estimated 1997 expenditures in Jasper National Park were $214 959 136. Slightly more than half of these expenditures (55.3%) were made by nonresident visitors. Total visitor expenditures for the FMF were estimated at $316 061 927 (grand total, Tables 12 and 13). Most of the 1997 expenditures in the Hinton area were made by Alberta residents (83.7%) rather than by nonresidents (as was the case in Jasper). When compared with all the key sectors (forestry, mining, and crude petroleum and natural gas production) in the FMF economy, the visitor sector, expressed as a percentage of all expenditures, represented 16% of the total. In fact, this sector is the third largest in the FMF, behind mining and forestry.

Expenditures by visitors to Jasper National Park in 1997 accounted for 68.0% of the FMF's total visitor expenditures, whereas Hinton's share was 32.0%. The FMF total from the 1990 and 1991 surveys was $275 391 800. The estimate for 1997 was $316 061 927, which represents an increase of only 12.87% (in nominal terms) in visitor-related expenditures in the FMF. For Jasper, there was a 21.12% increase, from $169 435 100 to $214 959 136, whereas for Hinton there was a 5.79% decrease ($106 956 700 to $101 102 791). However, the Evergreen tourist zone from which the 1991 estimates originated is considerably larger than our 1997 FMF study area.

An important aspect of this study is the recognition of interrelated visitor sectors. The first visitor sector is an established national park that attracts approximately 3 million people annually. Visitors to Jasper National Park make what are referred to as "end-destination" trips to the area. Past studies have shown that vacation and pleasure are the overwhelming reasons for most visits to Jasper. Although vacation and pleasure were important reasons for visitors to "the rest of the FMF" (the Weldwood forest management area, William A. Switzer Provincial Park, and Wilmore Wilderness Provincial Park), most individuals were on their way through the FMF (many presumably on their way to Jasper National Park). This is partially evident in Table 3, which shows that the 1994 Canadian travel survey (Statistics Canada 1994), which accounted for only end-destination visits, indicated that there were 401 000 domestic visitors to census district 14 (an area that approximates the FMF minus Jasper). In contrast, just under 2 million domestic visitors to roughly the same area were reported in the *1991 Alberta Resident Travel Survey* (Alberta Economic Development and Tourism 1994a). This means that, assuming no change in visitor patterns between 1991 and 1994, just over 1.5 million resident visitors pass through the FMF on their way to another end-destination. Also, 55.4% of accommodation expenditures in Hinton were made by "tourists," a category akin to "pleasure and vacation," and tourist groups (most likely visitors on bus trips) (Table 5). A final

Table 12. Total expenditures by nonresident and resident visitors to Jasper National Park

Expenditure category	Alberta nonresidents		Alberta residents		
	%[a]	$	%[a]	$	Total ($)
Accommodation		38 147 945		24 574 752	62 722 695
Camping fees	50.03	1 045 506[b]	44.3	1 163 464[b]	2 208 970
Restaurant meals and beverages		20 504 322[b]		16 823 771[b]	37 328 093
Groceries	3.2[c]	3 818 365	8.4[d]	8 070 443	11 888 808
Vehicle operation and maintenance	5.9[c]	7 040 110	19.0[d]	18 254 573	25 294 683
Car rental and local transportation	3.7[b]	4 414 984	ND	ND	4 414 984
Recreation and entertainment	4.5[b]	5 369 576	8.3[d]	7 974 366	13 343 942
Retail	11.4[b]	13 602 924	5.7[d]	5 476 372	19 079 296
Travel packages	19.0	22 671 541	8.2[d]	7 878 289	30 549 830
Other	1.9[b]	2 267 154	6.1[d]	5 860 679	8 127 833
Total	100	118 882 427	100	96 076 709	214 959 136

[a] Percentages may not sum to exactly 100 because of rounding.
[b] From Table 10.
[c] From Alberta Economic Development and Tourism (1991). See Table 1.
[d] From Alberta Economic Development and Tourism (1994a). See Table 1.
Note: ND = no data (See Table 1).

Table 13. Total expenditures by nonresident and resident visitors to Hinton and area

Hinton expenditures	Alberta nonresidents		Alberta residents		
	%[a]	$	%[a]	$	Total ($)
Accommodation		4 196 020		6 333 516	10 529 536
Camping fees	38.1	ND	18.4	ND	ND
Restaurant meals and beverages		2 090 127[b]		12 265 143[b]	14 355 270
Groceries	ND	ND	22.8	23 046 172	ND
Vehicle operation and maintenance	20.2[c]	3 332 818	33.0[d]	33 356 301	36 689 119
Car rental and local transportation	ND	ND	ND	ND	ND
Recreation and entertainment	ND	ND	4.5[d]	4 548 586	4 548 586
Retail	17.4[b]	2 870 843	11.8[d]	11 927 404	14 798 247
Travel packages	ND	ND	ND	ND	ND
Other	24.3[b]	4 009 281	8.9[d]	16 172 752	20 182 033
Total	100	16 499 089	100	84 603 702	101 102 791

[a] May not sum to exactly 100 because of rounding.
[b] From Table 10.
[c] From Alberta Economic Development and Tourism (1991). See Table 3.
[d] From Alberta Economic Development and Tourism (1994a). See Table 3.
Note: ND = no data (See Table 3).

indicator that Hinton serves as a stopover was the high percentage of visitor expenditures on vehicle operation and maintenance and the low percentage for accommodation expenditures (Table 5). End-destination visitors to the rest of the FMF were relatively small in number and consisted largely of hunters and campers.

Expenditure Estimates According to Visitor Type

Total expenditures by major visitor groups were not directly available. However, we were able to estimate the expenditures by different types of visitors using a two-step procedure similar to the one used to calculate total visitor expenditures. First, visitors to the FMF were divided into two broad groups: those who stayed in overnight accommodations such as hotels and motels and those who did not. From the data on accommodation expenditures for work crews, business travelers, tourists, tour groups, and convention visitors (Table 5), the total expenditures for these visitors were extrapolated.

First, we assumed that work crews, business travelers, tour groups, and some tourists stayed in hotel or motels during their visits to the FMF, as reported in Table 5. In addition to accommodation expenditures, other visitor-related expenditures such as meals and gas had to be included. According to *Travel Accommodation Statistics 1995-96* (Statistics Canada 1997), 69% of an average Canadian motel's revenue is attributed to accommodation expenditures, 14% to meals, 7% to alcoholic beverages, and 10% to other revenues. An additional 32.2% (Hinton) and 12.5% (Jasper), from Tables 3 and 1, respectively, was added for gas and vehicle repairs for visitors who stayed in hotels or motels in the FMF. For example, for visitors who stayed in hotels or motels in Hinton, accommodation expenditures represented 52.4% of their total expenditures. Because we were able to calculate accommodation expenditures (Table 5) and we knew what portion accommodation expenditures represented, total visitor expenditures for accommodation-based visitors could be calculated by determining the dollar value of accommodation expenditures. For Hinton, 1% was $210 330 ($10 529 559/52.3%), and for Jasper 1% was $1 023 209. The dollar value of 1% was then multiplied by the known percentages for the remaining unknown expenditures. For example, meal expenditures for Hinton-bound visitors represented 10.6% of total accommodation-based visitor expenditures, or $2 229 498. This was repeated for all expenditures for both Hinton and Jasper (Table 14).

Part of Table 5 is replicated in Table 15. Since we knew the breakdown by accommodation-based visitor and the total expenditures, the per-visitor group expenditure could be calculated. Table 15 presents the calculations of total expenditures by visitors who stayed in accommodations, also obtained by multiplying the percentages by $210 330 for Hinton and $1 023 209 for Jasper. Table 16 shows the accommodation-based visitor expenditures plus the expenditures for visitors who were in the FMF on a camping or day trip, passing through, or visiting friends. The camping expenditures were previously calculated (Table 8). The expenditures for those on day-trips, passing through, or visiting friends were calculated by subtracting expenditures for accommodation-based visitors and campers from total expenditures.

Visitor expenditures in Hinton that were attributable to accommodation stays represented just under 20% of all visitor expenditures in that area, and just over 11% were made by "tourists." The vast majority of expenditures, nearly 80% or $80 million, were attributable to pleasure or personal reasons not related to accommodation. In Jasper National Park, just over 43% of total visitor expenditures were estimated to be related to accommodation, and 35% of expenditures were made by "tourists." A total of 54.3% of expenditures by visitors to Jasper were made by day visitors, those passing through and those visiting friends.

Table 14. Expenditures by accommodation-based visitors to Hinton and Jasper National Park

Expenditure category	Hinton and area		Jasper National Park	
	%	$	%	$
Accommodation	52.4	11 021 292	61.4	62 825 032
Meals	10.6	2 229 498	12.4	12 687 791
Alcoholic beverages	5.3	1 114 749	6.2	6 343 896
Gas and vehicle repairs	24.4	5 132 052	11.1	11 357 619
Other	7.6	1 598 508	8.9	9 106 560
Total	100	21 096 099	100	102 320 898

Table 15. Types of accommodation users and their spending in Hinton and Jasper National Park

Type of visitor	Hinton and area		Jasper National Park	
	%	$	%	$
Work crews	23.9	5 026 887	0.2	204 642
Business travelers	16.4	3 449 412	5.8	5 934 612
Tourists	32.8	6 898 824	42.6	43 588 703
Tour groups	22.6	4 753 458	38.8	39 700 509
Convention groups	1.6	336 528	8.2	8 390 314
Other	2.7	567 891	4.4	4 502 120
Total	100	21 033 000	100	102 320 900

Table 16 Estimated expenditure contribution by visitor type

Type of visitor	Hinton and area		Jasper National Park	
	$[a]	%[b]	$[a]	%[b]
Accommodation-based visitors				
Work crews	4 821 411	4.77	204 437	0.10
Business travelers	3 308 416	3.27	5 928 677	2.76
Tourist accommodation-related expenses	6 616 831	6.54	43 545 107	16.60
Tour groups accommodation-related expenses	4 559 158	4.51	39 660 802	18.45
Convention travelers	322 772	0.32	8 381 922	3.90
Other	544 678	0.54	4 497 617	2.09
Subtotal	20 173 266		102 218 562	
Campers[c]	805 619	0.80	11 736 655	5.46
Day trip, passing through, visiting friends	80 123 906	79.25	101 003 919	54.30
Total[d]	101 102 791	100	214 959 136	100

[a] From Table 15.
[b] Values do not sum to 100 because of rounding.
[c] From Table 8.
[d] From Tables 12 and 13.

DISCUSSION AND CONCLUSIONS

The number of travelers has been increasing worldwide, a trend that will continue into the foreseeable future. Resident and foreign travelers are attracted to the FMF for a wide variety of reasons ranging from bus tours, recreation activities such as hunting, fishing, and camping, ecotourism, visiting friends or relatives, business travel, work on crews, or simply passing through. From an economic perspective, all of these types of visitors have an impact upon the local economy. This is particularly true of Hinton, where, because of limitations to business growth in Jasper National Park, there has been growth in the number of visitor-related facilities such as hotels and restaurants. The data collected in this report will allow us to determine the size of the visitor sector and compare it with the other major sectors in the FMF. We hope that this information will aid local and regional governments in their planning activities. We have also developed a methodology for determining the size of this sector, which can be used to measure future changes in the sector. The data collected in this report have already been employed in FMF regional economic impact models (Alavalapati et al. 1996, 1999).

However, a number of significant problems were encountered during this study. The most obvious was the paucity of reliably available and current data. We invested a significant amount of time and effort to collect reasonably accurate data. Even so, we suspect that some of the data, especially expenditures at restaurants, were underestimated. Another issue was the lack of current information concerning patterns of spending and trip purpose patterns for visitors to the FMF. Throughout the course of this study, we were forced to assume that these patterns had not changed since the early 1990s. However, in some cases, a 1% change in spending would have meant as much as a $1 million difference in total spending. Finally, the boundaries defined by Statistics Canada (census district 14) and the Alberta Department of Economic Development and Tourism (Evergreen tourism zone) both overlapped the FMF's boundaries. These problems point to the need for future primary data collection. However, such data collection inevitably entails surveys of visitors or businesses. A visitor survey is prohibitive in cost, whereas businesses may be reluctant to divulge information.

Despite these problems, we were able to estimate the size of the FMF visitor sector. We found that the visitor sector is the third largest sector in the FMF, after mining and forestry. The total estimated visitor expenditures for the FMF were calculated at just over $316 million. Of that total, nearly $215 million (68%) was spent in Jasper, whereas the remainder of just over $101 million was spent in Hinton. We also found that just over 35% of visitor expenditures in Jasper was related to accommodation and tourism. These expenditures were made by visitors who came to Jasper as their end-destination, mainly for a vacation or pleasure. Nearly 55% of the Jasper visitor expenditures was made on day trips, while passing through, or while visiting friends. In the case of Hinton, nearly 80% of the visitor expenditures was made on day trips, while passing through, or while visiting friends. Although no data exist, we suspect that a large portion of that 80% was spent by visitors passing through Hinton.

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